

BRIDGE-TYPE MAGNETIC RANDOM ACCESS MEMORY (MRAM) LATCH**Related Application**

[0001] This application is a continuation application of U.S. Application No. 10/246,245, entitled "BRIDGE-TYPE MAGNETIC RANDOM ACCESS MEMORY (MRAM) LATCH," filed September 17, 2002, ^{now Patent No. 6,714,441} the entirety of which is incorporated by reference herein.

Government Rights

[0002] This invention was made with Government support under Contract Number MDA972-98-C-0021 awarded by DARPA and Contract Number N00030-99-C-019 awarded by Charles Stark Draper Laboratory. The Government has certain rights in the invention.

Background of the Invention**Field of the Invention**

[0003] The invention generally relates to memory technology. In particular, the invention relates to non-volatile magnetic memory.

Description of the Related Art

[0004] Computers and other digital systems use memory to store programs and data. A common form of memory is random access memory (RAM). Many memory devices, such as dynamic random access memory (DRAM) devices and static random access memory (SRAM) devices, are volatile memories. A volatile memory loses its data when power is removed. For example, after a conventional personal computer is powered off, the volatile memory is reloaded upon a boot up. In addition, certain volatile memories, such as DRAM devices, require periodic refresh cycles to retain their data even when power is continuously supplied.

[0005] In contrast to the potential loss of data encountered in volatile memory devices, nonvolatile memory devices retain data for long periods of time when power is removed.